# 6.11 Solid Waste Management

# 6.11.1 Background

This section is applicable to the Environmental Services Department (ESD) which operates and manages the collection, reduction, and disposal of solid waste within the City of San Diego. Services provided by ESD include the collection of refuse and recyclable wastes, solid waste and hazardous waste code enforcement activities, and educating the public and businesses on recycling options. Additionally, ESD is responsible for operating and maintaining the Miramar Landfill and seven inactive landfills. The goal of this section is to reduce the impact of the ESD's operations and maintenance activities on storm water quality and provide guidance for the protection of water quality and receiving waters. This section contains the storm water best management practices (BMPs) the ESD will implement during department operations and maintenance activities, in addition to inventory, inspection, pollutant discharge reporting, education, and annual reporting requirements.

ESD's facilities operation and maintenance programs must meet the requirements of the Municipal Storm Water Permit (Order R9-2007-0001, "Municipal Permit," see Appendix I), as described in Table 6.11-1.

Table 6.11-1. Municipal Permit requirements - Solid Waste Management.

	Table of the management			
URMP	Municipal Permit			
Section	Section	Requirement (Summary)		
6.11.2	(Pg. 32) D. 3. a. (1)	Inventory municipal areas, activities and potential sources of pollutants.		
6.11.3	(Pg. 32-34) D. 3. a. (2,3,4,5)	Implement and maintain BMPs.		
6.11.4.1	(Pg. 35) D. 3. a. (7)	Inspect municipal areas, activities and implement any necessary follow up actions.		
6.11.4.2	(Pg B-6) Attachment B. 5. (e)	Report pollutant discharges to the storm drain system or receiving waters.		
6.11.4.3	(Pg. 45) D. 5. (b, d);	Implement and designate an educational program for all City personnel.		
6.11.4.4 and Appendix XIII "Annual Report Form Questions"	(Pg. 67) J. 3. (c, g, j); (Pg. 51) G. 3	Track and submit data for Annual Report Forms, track and report anticipated and actual fiscal year budget expenditures.		

#### 6.11.2 Source Characterization

The Environmental Services facilities inventory includes the "Green" Ridgehaven building, inactive and active landfills, and Miramar Place (see Appendix III, "Municipal Inventory"). ESD activities, their associated potential pollutants, and designated BMPs are listed in Table 6.11.2. ESD will update any changes to the inventory, activities,

and/or BMPs on an annual basis as part of the reporting process described in Section 6.11.4.4, "Annual Report Forms."

## 6.11.3 Best Management Practice Requirements

## 6.11.3.1 Updated BMP Requirements

The BMPs identified in Sections 6.11.3.1.1 to 6.11.3.1.2 below are the ESD's BMPs for operations and maintenance for solid waste activities. The minimum and activity-specific BMPs identified in this section are documented and implemented via ESD's standard operating procedures (SOPs).

If ESD determines that a municipal activity or procedure does or could result in a significant pollutant discharge in violation of Section 43.03 of the San Diego Storm Water Management and Discharge Control Ordinance ("Storm Water Ordinance"),, ESD will modify its activities or enhance BMPs to reduce the potential for future significant pollutant discharges. Whenever the BMPs are improved or revised, ESD will provide updates to its SOPs to the Storm Water Pollution Prevention Division with the annual report form (see Section 6.11.4.4). It is important to note that collectively, these BMPs represent the Maximum Extent Practicable (MEP) Standard required by the Municipal Permit. Therefore, if any BMPs are eliminated or modified, the replacement set of BMPs must collectively provide equal or greater storm water quality protection. For information on enforcement see Section 9.5 in "Illicit Discharge Detection and Elimination."

#### **6.11.3.1.1** Minimum BMPs

ESD will ensure that all City staff implements the following minimum BMPs, as applicable.

- 1. Prior to starting activities, <u>locate storm drain system and prevent pollutants from</u> entering. Activity-specific BMPs are listed in Table 6.11-2.
- 2. Only clean rainwater can be discharged to the storm drain system. See Storm Water Ordinance Section 43.0305 "Exemptions from Discharge Prohibition" for allowable discharges.<sup>1</sup>
- 3. Sweep up municipal areas after activities and/or spills. Hosing down pollutants into the storm drain is prohibited by Storm Water Ordinance Section 43.03. Use a broom, shovel, or other mechanical means to collect solids for reuse or disposal. Use absorbents to reduce the spread of liquids and absorb or pump up liquids for reuse or disposal. Dispose of hazardous waste as required by law or contact the Environmental Services Department, Hazardous Materials Management Program (ESD-HMMP) for assistance.
- 4. <u>Annually inspect and clear all storm drain system catch basins and drop inlets of debris</u> or other foreign material at locations listed in the municipal facility inventory

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<sup>&</sup>lt;sup>1</sup> http://clerkdoc.sannet.gov/RightSite/getcontent/local.pdf?DMW\_OBJECTID=09001451800870fc

- (see Appendix III) according the "Storm Drain Inspection/Cleaning Schedule" in Table 6.3-2, "Buildings/Parking/Landscaping." Annually inspect and clear open channels in a timely manner.
- 5. <u>Keep lids closed on trash cans and dumpsters</u> to prevent rainwater from entering, as applicable, and <u>ensure that trash is picked up around the cans and dumpsters</u> at all times. Provide enough trash cans/dumpsters in all appropriate areas.
- 6. <u>Keep materials and waste piles covered and, if possible, off the ground</u>. Materials and waste stockpiles must be protected to prevent contact with rainwater and any runoff. Check materials and stockpiles on a regular basis to verify the BMPs (such as roof covering, tarps, silt fences, palettes, etc.) are in good condition.
- 7. Routinely inspect vehicles for leaks, and service immediately if necessary. If vehicle is leaking, until vehicle is repaired <u>use drip pans for all vehicle leaks and/or clean up with dry methods</u> and dispose of as a regulated waste. Contact ESD-HMMP for assistance.
- 8. <u>Capture and properly dispose of all power washing water</u>. See fact sheet at <a href="http://www.sandiego.gov/thinkblue/pdf/mobilebusinessbrochure.pdf">http://www.sandiego.gov/thinkblue/pdf/mobilebusinessbrochure.pdf</a> for proper power washing methods and disposal requirements.
- 9. <u>Stencil storm drains in the Division's municipal inventory (Appendix III)</u> with "No Dumping—Goes to Ocean/No Tire nada—Llega al Mar/Think Blue", as appropriate. Check stencil legibility, and if necessary, re-stencil before September 30 of each year. Stencils and asphalt paint (blue on sidewalks/white on asphalt) are available from the Storm Water Pollution Prevention Division.
- 10. <u>Eliminate over-irrigation</u> as a means of minimizing the volume of potentially contaminated water entering the storm drain system.

It is ultimately ESD's responsibility to prevent pollutant discharges to the storm drain system. Therefore, ESD will identify and implement any combination of the above minimum BMPs and/or any additional BMPs to avoid discharging pollutants into the storm drain system.

ESD will coordinate with the Purchasing and Contracting Department to ensure that as operations and maintenance contracts are initiated or renewed, references to the Storm Water Ordinance and the most current minimum BMP requirements are written into the contract (see Appendix IX, "Municipal Operations and Maintenance Contract Language" for current language as of January 25, 2008).

### 6.11.3.1.2 Activity-Specific BMPs

In addition to the minimum BMPs listed above, the following BMPs listed in Table 6.11-2 will be implemented by ESD in its operations and maintenance of solid waste management activities.

Table 6.11-2. BMPs designated for areas and activities associated with Solid Waste Management.

Activity	Potential	Best Management Practices	
	Pollutants		
Community Cleanup Events	trash and debris, oxygen demanding substances, oil and grease, pesticides	<ul> <li>Curb Style Events – Code Enforcement and supervisory staff will carry spill kits on their vehicles.</li> <li>Bin Style Events – move material private vehicle to bin or packer. Return site to original condition when finished.</li> <li>Survey area after the event and dispose of any trash or debris to the landfill.</li> </ul>	
Christmas Tree Recycling	trash and debris, oxygen demanding substances	<ul> <li>Use bags and straw wattles protect storm drains inlets.</li> <li>When servicing sites, maintain and return to original condition.</li> </ul>	
Hazardous Waste Storage Area	nutrients, trash, oil and grease, pesticides, metals	<ul> <li>Store wastes are stored inside a designated chemical storage area, if inside.</li> <li>Store wastes in secondary containment, designated storage area, or on pallets and covered as necessary if outside during the rainy season.</li> </ul>	
Hazardous Materials Storage Area	nutrients, trash, oil and grease, pesticides, oxygen demanding compounds, metals	Store materials in a Connex box or covered.	

Activity	Potential	Best Management Practices			
Storm Drain System Inspection and Cleaning	trash and debris	<ul> <li>Remove trash and debris from open channels and inlets and properly dispose of these materials.</li> <li>Conduct annual visual inspections during the dry season especially if there are problem storm drain inlets where sediment/trash or other pollutants accumulate.</li> <li>Conduct field investigations to detect and eliminate improper disposal of pollutants into the storm drain system (e.g., identify problem areas where discharges or illegal connections may occur and follow up stream to determine the source(s)).</li> <li>Inspect and clear drainage facilities as needed during wet weather.</li> <li>At a minimum, inspect and clean all storm drain facilities (catch basins, storm drain inlets, open channels, etc.) of debris or other foreign material according to the schedule below. When practical, work is to be done when conditions are dry. Dispose of materials properly.</li> </ul>			
		Storm Drain Inspection/Cleaning Schedule			
		Debris Volume Frequency*			
		High (e.g., tends to clog during rains)	Annually, between May 1 and September 30.**		
		Medium (e.g., tends to collect measurable debris without clogging)  Annually at any time during the year.**			
		3. Low (e.g., generally free of debris)	Annually at any time during the year for Fiscal Year 2008 and 2009. Every other year thereafter.		
		* Any storm drain facility that is designed to be self-cleaning must be cleaned of any accumulated debris observed during an inspection immediately. Anthropogenic litter observed in open channels must be cleaned in a timely manner after obtaining all appropriate environmental clearances.  ** Following two fiscal years of inspections, any storm drain facility that does not contain debris may be re-classified as a "Low" priority facility and may be inspected as needed, but not less than every other year.			
Refuse Dumpsters	trash and debris	See this activity's BMP in Table 6.3-2, Section 6.3, "Buildings/Parking/Landscaping".			

Activity	Potential Pollutants	Best Management Practices
Landscaping	pesticides, nutrients, sediments	<ul> <li>Schedule chemical application at times when rain is not predicted and irrigation is not scheduled.</li> <li>Apply and handle pesticides and keep detailed records in accordance with existing state regulations (California Title 3, Division 6, "Pesticides and Pest Control Operations").</li> <li>Collect and dispose of unused chemicals as a regulated waste.<sup>2</sup></li> <li>Use native plants when possible.</li> <li>Keep removed vegetation, including clippings, chips, loose soils, and pruning debris away from storm drain inlets and watercourses.</li> <li>Consider applying compost instead of chemical fertilizers.</li> <li>Rely on integrated pest management methods, including: <ul> <li>No controls</li> <li>Physical/mechanical controls</li> <li>Environmental controls (mulching, pest-resistant vegetation, prescribed burns)</li> <li>Biological controls (predators, parasites, etc.)</li> <li>Less toxic chemical controls (e.g., soaps and oils) and/or hot water</li> </ul> </li> <li>If absolutely necessary, use the least toxic chemicals that will do the job (e.g., biodegradable products). Avoid use of copper-based</li> </ul>
Parking Lot/Structure Maintenance  Last Chance	trash and debris, oil and grease	<ul> <li>Sweep and/or vacuum parking lot 1 x month</li> <li>Use drip pans for all vehicle leaks and/or clean up with dry methods and dispose of as a regulated waste.<sup>3</sup></li> <li>Keep lids closed on solid waste cans and dumpsters at all times. Provide enough solid waste cans/dumpsters in all appropriate areas.</li> <li>Use plastic liners in trash and recycling receptacles in front of building.</li> <li>Protect storm drain inlets with straw wattles.</li> </ul>
Recycling	debris, metals, oxygen demanding substances	Use all weather treatment for tipping deck and vehicular ingress/egress surfaces.
Fire Sprinkler Flushing	sediments, nutrients	Collect water in 5 gallon buckets and dispose of in sewer system.
Heavy Equipment at Landfill	oil and grease	<ul> <li>See Landfill Equipment Fluid Releases; Fueling Nozzle Leaks; and Hazardous Materials Spill Response and Reporting SOPs in Appendix XIX.</li> <li>Use drip pans and absorbent pads.</li> <li>Maintenance contractor maintains regulatory compliance and practices good housekeeping techniques.</li> </ul>

<sup>&</sup>lt;sup>2</sup> Contact ESD HMMP for instructions. <sup>3</sup> Contact ESD-HMMP for disposal options.

Activity	Potential Pollutants	Best Management Practices
Landfill Operations	sediments, nutrients, trash and debris and oil and grease, bacteria and viruses	<ul> <li>Compact all solid waste cover daily. No water is allowed to stand on any landfill cover.</li> <li>Apply mulch onto slope, intermediate cover areas, and stockpiles.</li> <li>Revegetate when operationally feasible.</li> <li>Pump down sedimentation basin between storm events.</li> <li>Apply tackifier to exposed cut/fill areas.</li> <li>See "Inclement Weather; General Site Maintenance; Litter Control; and Leachate Disposal SOPs" in Appendix XIX.</li> </ul>
Greenery Operations	sediments, nutrients, trash and debris and oil and grease, bacteria and viruses	<ul> <li>Divert run-on around the site.</li> <li>Cover bare areas with mulch/compost.</li> <li>Haul trash contaminated or unsuitable materials to the landfill.</li> <li>Maintain adequate windrow temperatures and moisture content.</li> <li>Finished product is stored upgradient of raw product.</li> <li>Ensure equipment that is used to handle finished product is free of any residue of raw product.</li> <li>See "Inclement Weather; General Site Maintenance; Litter Control; Windrow Building Operations; and Fecal Contamination Prevention SOPs" in Appendix XIX.</li> </ul>
Landfill Gas Collection	sediment, metals, organic compounds	<ul> <li>Systems maintained to collect and properly dispose of landfill gas condensate.</li> <li>Materials for maintenance are stored in Connex box or covered.</li> </ul>
Inactive landfills	sediments, nutrients, trash and debris	<ul> <li>Cover bare spots with mulch/compost.</li> <li>Install silt fences, wattles, geotextiles, rock rip rap, energy dissipaters or other BMPs as applicable.</li> <li>Revegetate as necessary.</li> <li>Maintain deck and slope surfaces for proper drainage.</li> <li>See "Minor and Major Grading and NPDES – Drainage Improvements SOPs" in Appendix XIX.</li> </ul>
Native Plant Nursery	sediments, nutrients, pesticides	Utilize computerized watering system, and closely monitor hand watering to avoid water run off.
Material Loading/Unloading		<ul> <li>See this activity's BMP in Table 6.3-2, Section 6.3, "Buildings/Parking/Landscaping"</li> </ul>
Material Handling/Storage and Disposal		See this activity's BMP in Table 6.3-2, Section 6.3,     "Buildings/Parking/Landscaping"
Vehicle and Equipment Fuel Dispensing Areas		<ul> <li>See this activity's BMP in Table 6.3-2, Section 6.3, "Buildings/Parking/Landscaping"</li> <li>See this activity's BMPs in Table 6.15-2 Section 6.15, "Vehicle Maintenance/Operations Yards."</li> </ul>

# 6.11.3.2 Additional Controls fro Municipal Area and Activities

In addition, the Municipal Permit requires that the City implement additional BMPs at municipal facilities that discharge to, or are tributary to, a 303(d) listed water body, lagoon, or water body on environmentally sensitive lands (all City facilities are subject to this requirement). To meet this additional BMP requirement, each City facility will

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conduct a second facility inspection as described in detail in Section 6.11.4.1 "Facilities Inspections and Improvements."

## 6.11.4 Program Implementation

The previous sections described the minimum and activity-specific BMPs that must be implemented. This section describes the administrative steps that departments will undertake to prepare for and verify the implementation of those BMPs including facility inspections, discharge notifications, education and training, and annual reporting. In addition, departments will maintain a storm water representative responsible for overseeing the departments implementation efforts. The Storm Water Pollution Prevention Division will meet periodically with each department's storm water representative to assist with the implementation efforts.

### 6.11.4.1 Facility Inspections and Improvements

This section applies to ESD which maintains its own buildings, grounds and the active and inactive landfills. The Municipal Permit requires that the City inspect all municipal facilities annually. The purpose of the facility inspections is to evaluate the adequacy of existing BMPs, modify and improve BMPs where necessary and identify any potential pollutant discharges (Note: see Section 6.11.4.2, "Pollutant Discharge Notification" below for reporting requirements).

In addition, the Municipal Permit requires that the City implement additional BMPs at municipal facilities that discharge to, or are tributary to, a 303(d) listed water body, lagoon, or water body on environmentally sensitive lands (all City facilities are subject to this requirement). To meet this additional BMP requirement, each City facility will conduct a second facility inspection. As shown in Table 6.11-3, the first inspection will occur before the beginning of the rainy season (during September) and the second inspection will occur during the rainy season (preferably during January, but prior to the end of April).

Table 6.11-3. Municipal Facility Inspection Requirements.

Inspection	Timeframe	
First	September	
Second	January - April	

If as a result of the inspection ESD determines that improvements to its BMPs are required, ESD will perform the action (e.g., repair a structural BMP and/or update the SOPs), and subsequently conduct a follow-up inspection of the BMPs to verify that the original issues have been resolved (Note: if repairs, modifications or improvements to the BMPs are necessary, those follow-up actions and re-inspections will not count as the second inspection). If ESD determines that the modifications require additional time or funds to implement, ESD will develop an anticipated schedule for when the

modification will be completed. Record of any changes/improvements instituted as part of the municipal facility inspection process will be included in the annual report forms provided to the Storm Water Pollution Prevention Division each year.

The Municipal Facility Inspection Forms are attached as Appendix XIV, "Inspection Forms" and are also located on the City's website at http://www.sandiego.gov/thinkblue/resources/index.shtml.

#### 6.11.4.2 Pollutant Discharge Notification

Certain non-storm water discharges, because of their nature or magnitude, require timely reporting to the San Diego Regional Water Quality Control Board (Regional Board). A significant threat to water quality or human health is determined on a caseby-case basis by ESD and depends on the type of pollutant, the degree of the violation (i.e., the amount of pollutant discharged into the municipal storm drain system), the proximity to receiving water bodies, the potential for exposure to the public, and the potential for environmental damage. Generally, for a discharge to be considered a significant threat to water quality or human health, the discharge must contain a nonstorm water substance and enter the storm drain system. See Storm Water Ordinance Section 43.0305 "Exemptions from Discharge Prohibition" to review the list of allowable non-storm water discharges (Appendix II). Please be aware that the 24-Hour reporting process is designed to address significant discharges as a result of significant accidents, not day-to-day operations or activities, or even minor accidents. A small water line break, for example, that occurs in a natural area but causes little or no environmental damage, would generally not be considered a significant event that would require reporting through the 24-Hour reporting process. In another example, a fuel spill that is contained and removed from a paved parking lot, without any of the substance entering the storm drain system or receiving waters, would not be considered a significant reportable discharge.

When ESD determines that a discharge poses a significant threat to water quality or human health, ESD must notify the Regional Board by facsimile within 24 hours of the discharge event using the Chemical Release Reporting Form 304 available in Appendix XV and also on the City's website at

http://www.sandiego.gov/thinkblue/resources/index.shtml. A copy of the form must also be forwarded to the City's Storm Water Pollution Prevention Division for record keeping purposes. Additionally, a more detailed written report of the event and follow up actions must be sent by the ESD to the Regional Board within five working days of the day the event was identified.

ESD will also notify other regulatory agencies as required on Form 304.

# 6.11.4.3 Education and Training

The Municipal Permit identifies five target communities to receive education using all media as appropriate:

- Municipal Departments and Personnel
- Construction Site Owners and Developers
- Industrial Owners and Operators
- Commercial Owners and Operators
- Residential Community, General Public, and School Children

The Municipal Permit requires that the goals of education and outreach activities to targeted communities be two-fold:

- 1. To measurably increase the knowledge base and;
- 2. To measurably change the behavior(s) of the target audiences with regards to storm water pollutants found in the storm drain system.

For more comprehensive information on the roles of the Storm Water Pollution Division and other City Departments see Table 10-2 in Section 10.0, "Education."

### 6.11.4.3.1 General Storm Water Training

This section describes City-wide trainings provided by the Storm Water Pollution Prevention Division.

# **New Employees**

The Storm Water Pollution Prevention Division is responsible for developing and providing all new employee trainings. All new staff will receive a basic introduction to storm water issues via a "Storm Water and You" training module presented at the "New Employee Orientation" workshop. Staff that do not take the "New Employee Orientation" workshop (e.g. seasonal, part-time, etc.) will receive general storm water training as part of their employee orientation within their department.

# **Existing Employees**

Existing employees with regular access to a computer will be mandated to receive "refresher" training in storm water pollution prevention every two years via a City-wide training element developed by the Storm Water Pollution Prevention Division. Additionally, knowledge assessment via "e-tests" for randomly selected City employees with regular computer access will occur periodically between the mandated "refresher" courses. Finally, the Storm Water Pollution Prevention Division will develop a computer-based training (CBT) module addressing common activities shared by multiple field crews throughout the City.

# 6.11.4.3.2 Activity-Specific Training

### **Municipal Departments**

This section describes activity-specific trainings provided by ESD. ESD will create, execute and fund activity-specific training sessions that incorporate the minimum storm water BMPs in Table 6.11-4. The Storm Water Pollution Prevention Division can assist departments with the development of training materials at their request.

Table 6.11-4. Activity-Specific BMP Training(s) Provided by ESD.

Training Module/Item	Staff Level (i.e., Supervisor, Crew, etc.)	Schedule
Support Services	,	
Hazardous Material Handling	Supervisor, Crew	Annual
CRT Management and Handling	Supervisor, Crew	Ongoing
Handling and Management of Universal Waste	Supervisor, Crew	Ongoing
Managing Materials Associated with Community Cleanups	Supervisor, Crew	Ongoing
Management of Vehicle Batteries (illegal dump and community cleanups)	Supervisor, Crew	Ongoing
HSET		
Review BMPs for hazardous waste storage area	Supervisor, Crew	6/13/07
Facility Maintenance Staff And Vendors		
Storm Drain Maintenance (internal staff and vendor)	Supervisor, Crew	Spring 2008
Parking Lot Maintenance (internal staff and vendor)	Supervisor, Crew	Spring 2008
Litter and Recycling Container Storage Area Maintenance (internal staff)	Supervisor, Crew	Spring 2008
Proper Fire Sprinkler Flushing Disposal (vendor)	Supervisor, Crew	Spring 2008
Landscape and Irrigation Maintenance (vendor)	Supervisor, Crew	Spring 2008
Fountain Maintenance (internal staff)	Supervisor, Crew	Spring 2008
Disposal Staff		
Standard Operating Procedures (SOPs)	Supervisor, EMS manager	Ongoing
BMP installation	Supervisor	Ongoing
Nursery operations	Supervisor	Ongoing

Note: the completion dates listed are estimated. Actual completion dates may vary depending upon other program factors.

# 6.11.4.3.3 Department Education and Outreach to the Public

This section identifies the various public education and outreach activities to be performed by ESD in consultation with the Storm Water Pollution Prevention Division (e.g., including the Think Blue logo on materials). Table 6.11-5 lists the activities, specific targeted communities, and the anticipated completion dates.

Table 6.11-5. Department External Outreach Activities by Target Audience.

Department/Division Activity	Target Audience(s)  1. Construction Site Owners and Developers  2. Industrial Owners and Operators  3. Commercial Owners and Operators  4. Residential Community, General Public, and School Children  5. Under-represented audiences in 1-4	Available
Think Blue informational materials on display in Environmental Services Foyer information rack	1,2,3,4,5	Summer 2008
Storm Water related article placement in Curbsider Newsletter	1,2,3,4,5	Winter 2008

### 6.11.4.4 Annual Report Forms

The Municipal Permit requires the City to report on its storm water activities by September 30 each year beginning in September 2008. Also, each fiscal year a budget is developed and maintained by Environmental Services Department to track expenditures for designing, developing, and implementing BMPs and educational activities. ESD's annual report information will be submitted to the Storm Water Pollution Prevention Division on or before July 21 each year. See Appendix XIII, "Annual Report Form Questions" for department-specific reporting requirements.